# Union Carbide Canada Limited
# Annual Report 1977

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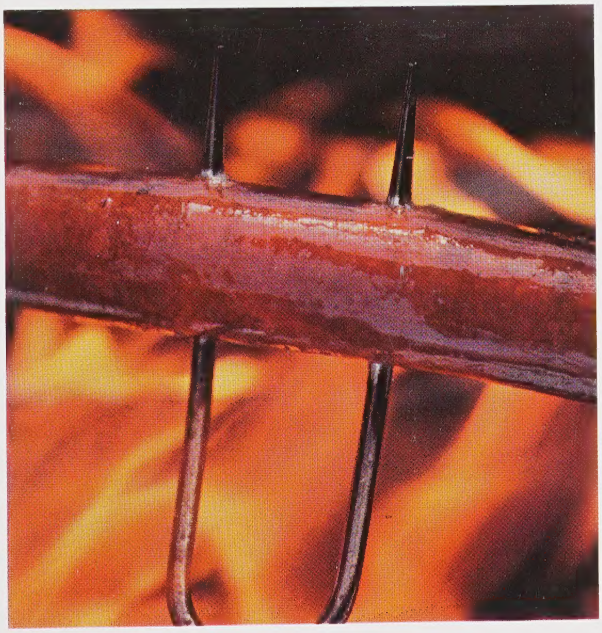
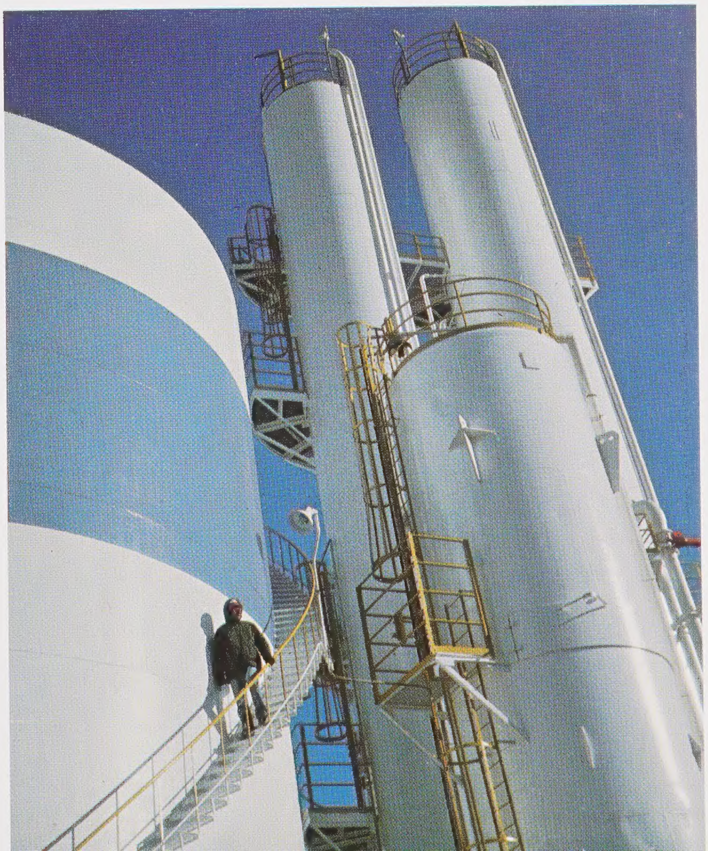




## Directors

†* Jacques de Billy
Senior Partner, Messrs Gagnon, de Billy, Cantin, Dionne, Martin, Beaudoin & Lesage
Quebec City

Douglas F. S. Coate
Secretary and General Counsel
Union Carbide Canada Limited
Toronto

* John S. Dewar
President
Union Carbide Canada Limited
Toronto

†* Alec Flamm
Senior Vice-President
Union Carbide Corporation
New York

Alexander I. Hainey
Vice-President
Union Carbide Canada Limited
Toronto

W. Norman Kissick
Vice-President
Union Carbide Canada Limited
Toronto

† Fred B. O'Mara
Executive Vice-President
Union Carbide Corporation
New York

Gordon W. Patterson
Vice-President
Union Carbide Canada Limited
Toronto

†* Ian D. Sinclair
Chairman of the Board
Canadian Pacific Limited
Montreal

†* James C. Thackray
President
Bell Canada
Montreal

†* Richard M. Thomson
President and Chief Executive Officer
The Toronto-Dominion Bank
Toronto

**Audit Committee*
*†Compensation Committee*

## Executive Officers

President
John S. Dewar

Vice-Presidents
Alexander I. Hainey
W. Norman Kissick
Gordon W. Patterson

Secretary and General Counsel
Douglas F. S. Coate

Treasurer
Vernon V. Garlick

Controller
George A. Kelly

## About Union Carbide

*Union Carbide Canada Limited is a diversified manufacturing company with component businesses in chemicals, plastics, gases, metals and carbon. While primarily a supplier of basic materials to industry, Union Carbide also makes products for the consumer, including EVEREADY batteries, GLAD plastic wrap and bags and PRESTONE II anti-freeze. The Company is 25 per cent Canadian owned, its common shares being held by more than 5,000 shareholders. The remaining 75 per cent equity is owned by Union Carbide Corporation of New York. Approximately 4,700 people are employed in Union Carbide plants and sales offices across Canada.*

*Sur demande, il nous fera plaisir de vous envoyer l'édition française de ce rapport.*

*The Annual Meeting of Shareholders will be held at 2.30 p.m. on Thursday, April 27, 1978, at the Canterbury Inn, Sarnia, Ontario.*

# To our shareholders

The difficult business conditions of a troubled economy and the heavy cost burden of a major expansion combined to inhibit Union Carbide Canada Limited's 1977 financial performance.

Sales increased marginally to $406.5 million as the economy recorded less than half its projected growth rate for the year. Net income was $20.5 million, or $1.94 per common share, substantially below the $32.1 million, or $3.21 per common share, earned in 1976. The decline was due to four factors:

- Lack of overall increase in sales volume due to the general economic slowdown;
- An inability because of market conditions to increase selling prices to the degree needed to offset continually inflating costs of petroleum-derived products and other raw materials;
- The commissioning expense of the company's largest-ever expansion, a world-scale polyethylene plant at Moore Township, Ontario;
- Higher interest charges on borrowings undertaken to finance the new polyethylene plant and other construction and investment projects.

The final cost of the Moore Township facility followed the inflationary trend of many current construction undertakings, increasing to $197 million from the previous $170 million estimate. To finance this additional cost and improve the Company's financial position generally, a $60 million issue of preferred shares was successfully placed in August with a number of financial institutions.

Total construction expenditures of $82.3 million, while the second highest in the Company's history, were down 25 per cent from the record level of the previous year. Capital spending is expected to drop further in 1978 and remain relatively stable for the next several years.

Although the past year proved to be a disappointing one from a sales and earnings viewpoint, it was a period of achievement in many other areas. Our safety performance, for example, was the best in our 70-year history. We exceeded our goal in energy conservation and we continued to maintain our leadership role in occupational health and environmental improvement.

A year ago, I depicted 1977 as a year of transition for Union Carbide as the Company experienced the growth pains of moving to a significantly higher production base. Prevailing business conditions have dictated a stretching out of that transitional period. The challenge now is to achieve the volume necessary to profitably utilize our expanded production capacity and it is to this end that all our resources are aggressively being devoted. While there is little indication of any significant turn-around in the economy, Union Carbide is well positioned to take advantage of an upturn as soon as it occurs.

An unusual and formidable set of economic and constitutional problems has led to a climate of widespread uncertainty in Canada. However, this is a nation with strengths and characteristics that will allow it to learn and, ultimately, benefit from such difficulties. At Union Carbide, we remain confident that, given time, the economy will regain impetus and a new and acceptable federal structure will emerge.

To the many talented men and women who make up the Union Carbide Canada organization, I would like to extend my sincere appreciation for their constructive efforts and achievements during an unusually challenging period.

President

# Operations Review

Sales in 1977 exceeded the $400 million mark for the first time, reaching $406,536,000. The three per cent improvement over 1976 sales of $393,735,000 resulted essentially from modest price increases as volume remained virtually unchanged, reflecting business conditions.

Demand for plastics strengthened and markets for chemicals posted some improvement. Union Carbide's metals, carbon and gas products businesses, however, all suffered from weakness in the markets they serve.

Stable sales volume and the lack of opportunity to institute necessary price increases to offset higher production costs were the major reasons behind a decline in net income to $20,500,000, or $1.94 per common share, from the $32,121,000, or $3.21 per common share, earned the previous year.

The preliminary operating expense of the new Moore Township facility and higher debt service charges adversely affected net income by 52 cents per share compared to 1976. It is Union Carbide's policy to write off such costs as they are incurred, rather than absorbing them over a number of years.

The impact of these costs on 1977 earnings was alleviated in part by improvements in non-operating gains amounting to 60 cents per share. These included the three per cent inventory allowance enacted late in the year, investment tax credits, inventory profits and adjustments to previous years' tax provisions.

In April, Union Carbide entered the marine food business by acquiring a 50 per cent interest in Apex Bio-Resources Ltd., a Vancouver Island salmon farming operation. Although initial production will be relatively small and devoted entirely to export markets, the long-term prospects for aquaculture are considered promising with consumer demand for seafood increasing steadily.

## The Year At A Glance

| | 1977 | Per Common Share | 1976 | Per Common Share |
|---|---|---|---|---|
| Sales | $406,536 | | $393,735 | |
| Net Income | 20,500 | | 32,121 | |
| Net Income after provision for dividends on preferred shares | 19,428 | $1.94 | 32,121 | $3.21 |
| % of Sales | 4.8% | | 8.2% | |
| % of Invested Capital* | 4.7% | | 9.1% | |
| % of Common Shareholders' Equity* | 8.1% | | 14.5% | |
| Dividends on Common Shares | 9,000 | 0.90 | 8,875 | 0.89 |
| % of Net Income (after preferred dividends) | 46.3% | | 27.6% | |
| Net Income Reinvested | 10,696 | 1.07 | 23,246 | 2.32 |
| Total Assets | 619,331 | | 546,064 | |
| Construction Expenditures | 82,299 | | 110,207 | |
| Depreciation and Amortization | 18,104 | | 17,012 | |
| Common Shareholders' Equity (Book Value) | 244,540 | 24.45 | 233,844 | 23.38 |
| Number of Common Shareholders | 5,200 | | 5,500 | |
| Market Price Range: High | | 19.25 | | 24.00 |
| Low | | 16.25 | | 17.62 |

(dollars in thousands – except per share figures)

*Based on average of beginning and end of year figures. Invested capital includes short-term debt, long-term debt and Shareholders' Equity.

*Twin high-density polyethylene reactors loom over the site of Union Carbide's newly-completed plant at Moore Township. The $197 million facility more than doubles the Company's capacity for the most widely used of all plastics.*

*Union Carbide supplies the majority of the synthetic food casings used by Canadian meat packers for the production of wieners, sausages and other processed meats, in addition to serving export markets around the globe.*

## Chemicals

Sales of chemicals improved in 1977 although most markets registered only moderate growth. Substantial gains were obtained in sales of chemicals for natural gas treatment and for use in the production of paints and other coatings.

An exception to the growth pattern was the textile industry which continued to suffer the effects of intensive import competition. Ethylene glycol, one of the principal chemicals manufactured at Union Carbide's Montreal East petrochemical complex, is a key ingredient in polyester synthetic fibre.

Ethylene glycol is also extensively used in automotive anti-freeze and this market experienced substantial recovery from the low level of the previous year. The domestic price of anti-freeze and many other chemicals declined significantly, however, because of a continuing threat of offshore imports. In the latter half of the year, the negative impact of this pricing pressure was partially blunted by high plant operating efficiencies and restrained increases in raw material costs.

A study to evaluate the opportunities for Union Carbide in current Alberta petrochemical developments was completed and is undergoing assessment in the company's strategic planning process.

## Plastics

The completion of the Moore Township polyethylene facility in late 1977 reinforced Union Carbide's position as Canada's leading supplier of the most widely used plastic.

The plant began producing high-density resin at mid-year, using ethylene feedstock transported from Montreal East. In November, production was stepped up when ethylene became available from the adjacent primary petrochemical facility of Petrosar Limited, in which Union Carbide holds a 20 per cent equity interest. Low-density polyethylene facilities went into operation with Petrosar ethylene early in 1978.

The Moore Township plant, with an annual capacity in excess of 400 million pounds, complements Union Carbide's existing Montreal East polyethylene operation, increasing the Company's total annual polyethylene production capability to 500 million pounds of low-density and 200 million pounds of high-density resins.

Sales of low-density polyethylene improved significantly during the year, particularly to wire and cable markets which enjoyed strong growth. Export sales were aggressively pursued, allowing high operating rates at Montreal East.

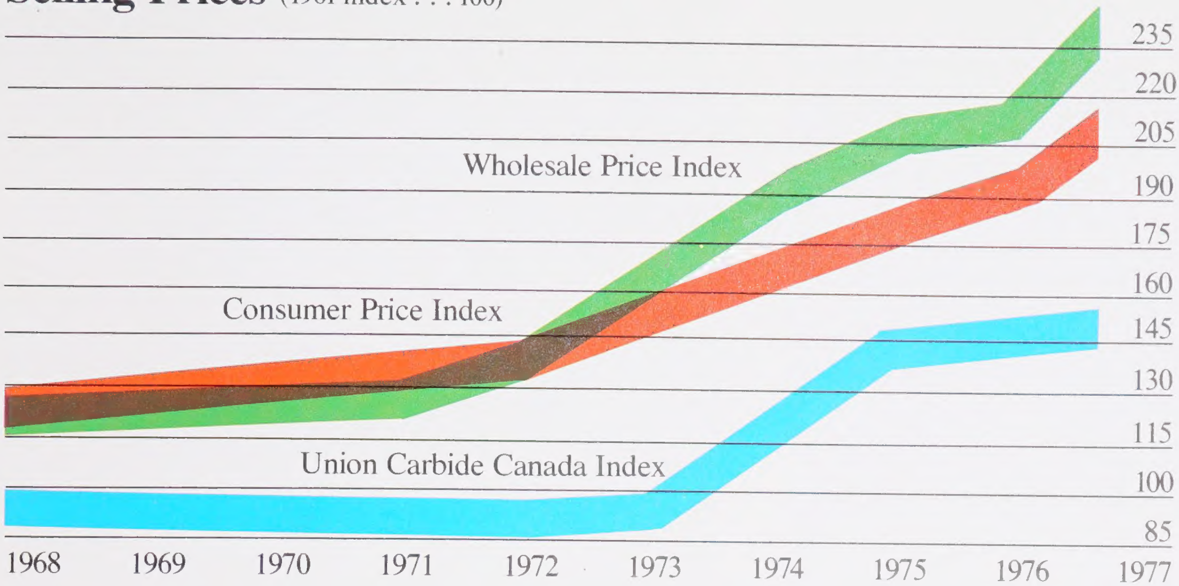
Market build-up of high-density resin was achieved in line with sales objectives. Technology efforts concentrated on supporting market penetration with such new applications as special containers and drums for chemical product shipments, spiral-wound pipe for non-pressure service and superior types of film for retailers' plastic bags.

The company's polyethylene film business achieved higher sales in 1977 despite a market that continued to be plagued by over-capacity. Aggressive competition exerted severe pressure on prices.

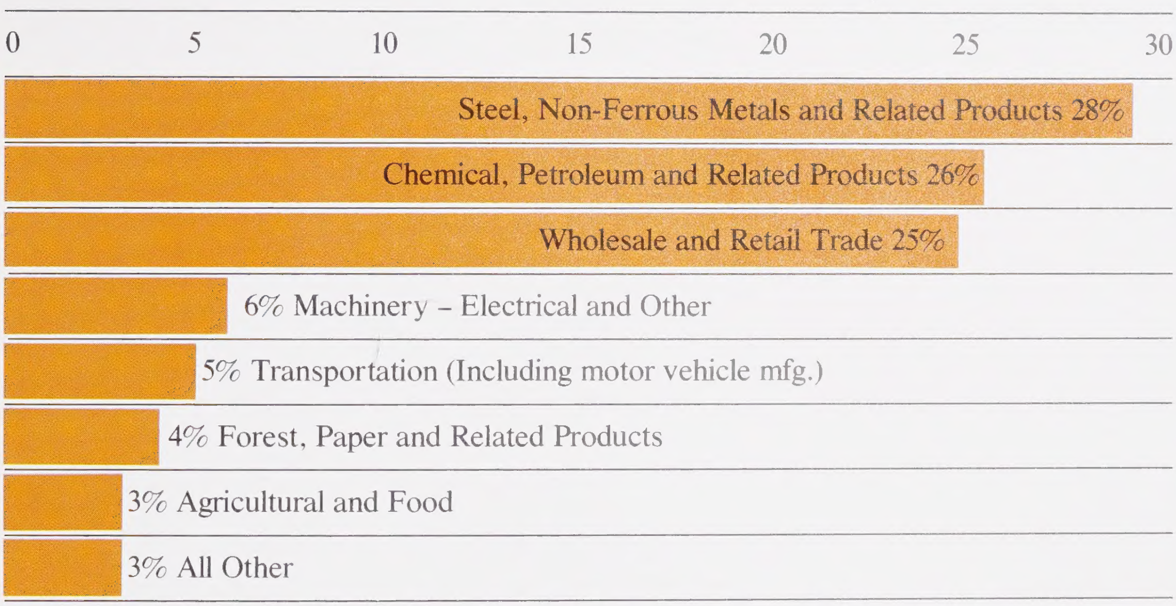
Sales of food casings to meat producers posted modest gains as domestic demand increased sufficiently to pick up the slack of a slight decline in exports. Union Carbide is Canada's leading supplier of synthetic food casings for the meat industry.

Cautious consumer spending patterns restrained plastic wrap and bag demand but the company's GLAD products continued to pace the market. Late in the year, a new GLAD line of "open top" storage bags was introduced nationally. The product line is designed to meet short-term storage needs around the home.

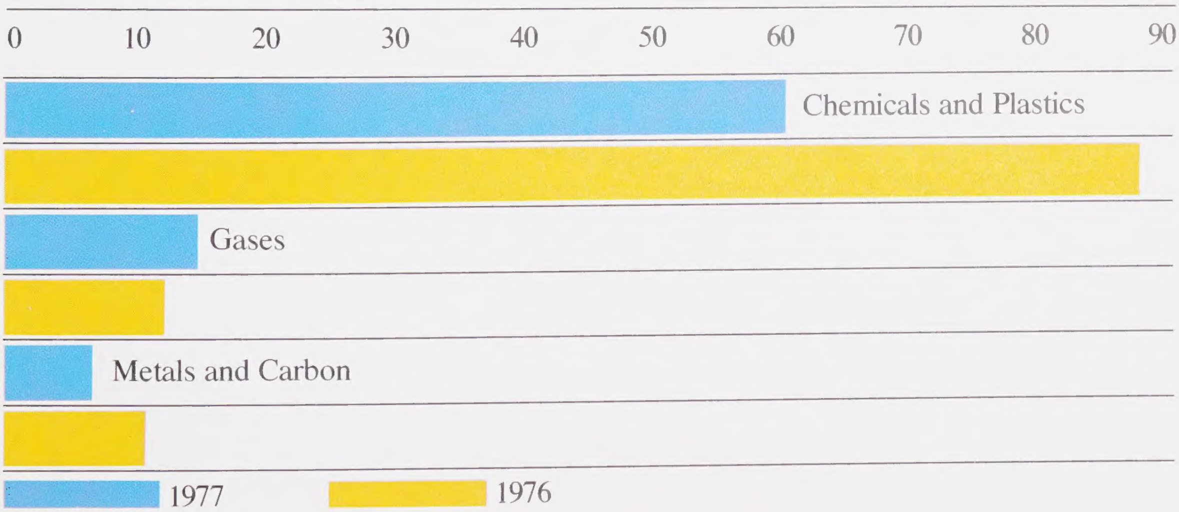
## Selling Prices (1961 index . . . 100)




## Sales by Markets (per cent of sales)




## Construction Expenditures by Group (in millions)



*This Oakville air separation plant is the newest of eleven such Union Carbide facilities serving industrial and medical markets from coast to coast.*

## Gases

Union Carbide produces industrial gases at a network of air separation plants across the country. Other activities of this business include the manufacture and marketing of welding and cutting equipment and high-technology stream separation systems.

While gas sales improved over 1976's level, with significant gains being recorded in the supply of nitrogen to oil and gas well servicing operators in Western Canada, the overall performance of this business was restricted by the generally low investment in new plants and equipment.

Significant sales achievements included a contract to supply a $1.6 million UNOX wastewater treatment system to a pulp and paper project at Kwidzyn, Poland. Financing of the installation will be handled by the Canadian Export Development Corporation.

To better supply the oxygen, nitrogen and argon requirements of Southern Ontario customers, a new $12.3 million air separation plant went into operation at Oakville in September. With a combined capacity of 260 tons of air separation products daily, the new plant was commissioned ahead of schedule and replaced an outdated small facility.

At Sarnia, an expansion of existing nitrogen production capacity was started and is due for completion in the third quarter of 1978. The $2.3 million project will improve Union Carbide's ability to supply nitrogen by pipeline to petroleum and petrochemical customers.

Another major construction project got under way in Alberta where work began on a $23.1 million air separation facility at Fort Saskatchewan. Scheduled for start-up in 1979, the plant will provide gaseous oxygen to a new nearby Dow Chemical of Canada Limited petrochemical plant, gaseous nitrogen to Dow and other industrial customers in the area and liquid oxygen and nitrogen to expanding industrial and medical markets throughout Western Canada.

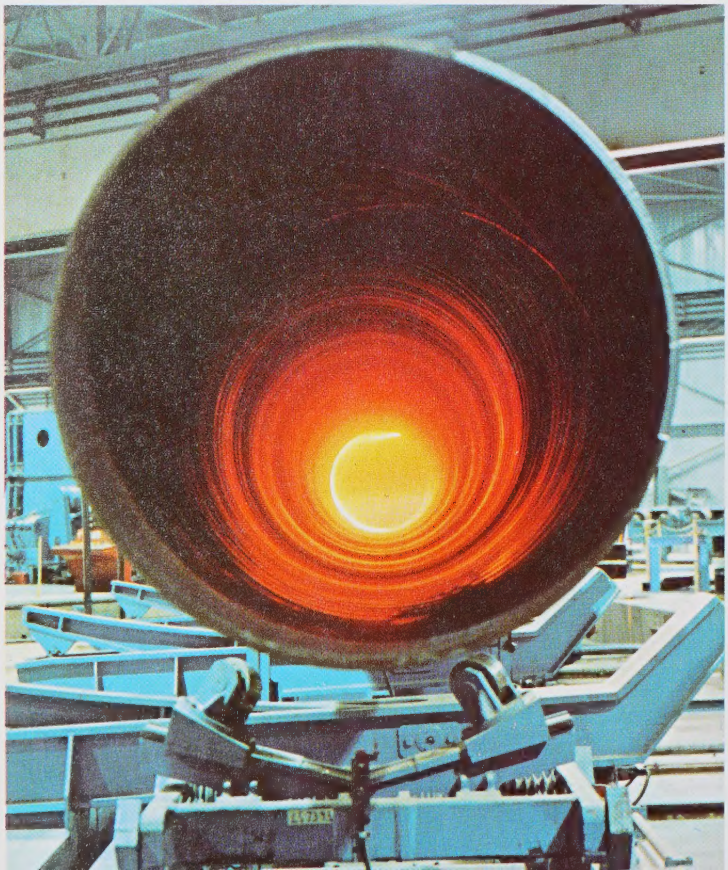
In other business developments, the technical services laboratory at Don Mills, Ontario, began manufacturing ozone generators. Ozonation is receiving wide acceptance as a safe and efficient substitute for chlorine to de-colour and purify drinking water.

Development efforts concentrated on the design of welding and cutting equipment for spiral-welded pipe, new equipment and procedures for protecting steel with a nitrogen atmosphere during the refining process and additional oxygen enrichment applications for a variety of metallurgical processes.

## Metals and Carbon

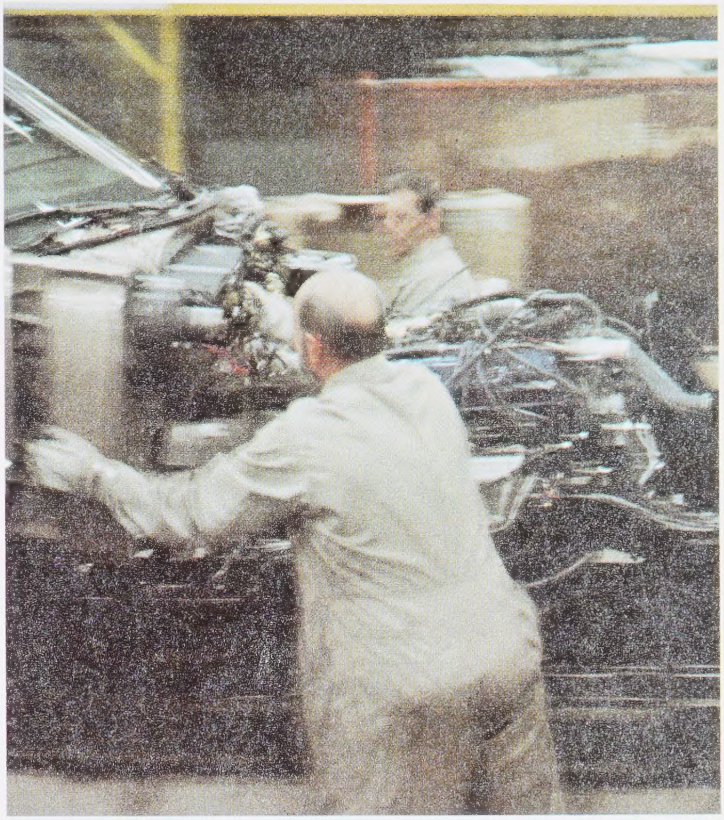
The general decline in Canadian capital spending was a major factor in the performance of this area of Union Carbide's operations. Both metals and carbon sales held to 1976 levels.

The results reflected a shift in the mix of Canadian steel production away from structural steel, which depends on Union Carbide's ferroalloys for its toughness and dura-

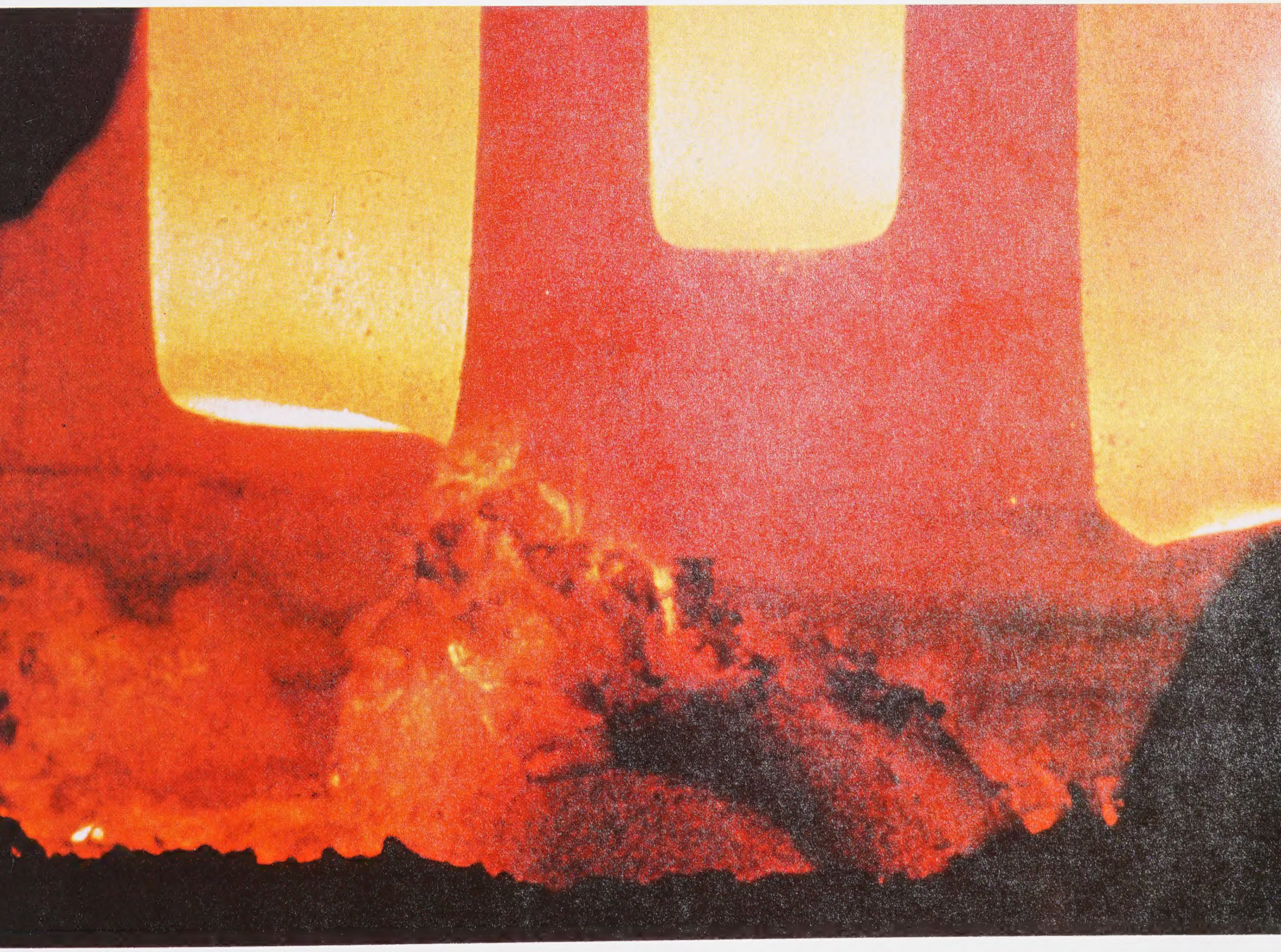


*Union Carbide is a leading supplier of equipment that welds and cuts pipe for natural gas and oil transportation. Here, a section of spirally-welded pipe is cut into transportable lengths by the Company's plasma arc cutting apparatus.*

*Ferroalloys from Union Carbide not only provide steel with its qualities of strength and durability but are also used in the production of numerous automative parts, including engine blocks, crankshafts, cylinder heads and brake drums.*



*Graphite electrodes produced at the Welland carbon products plant play an essential role in Canada's electric furnace steel industry. These electrodes are seen through the tap-hole of a furnace.*



bility and is refined in electric arc furnaces powered by the Company's principal carbon product, graphite electrodes. While total Canadian steel output was marginally ahead of the previous year, electric furnace steel production dropped well short of capacity.

Ferroalloys also are supplied to the automobile and foundry industries. Automobile manufacturers experienced marginal growth during the year while foundries operated at markedly lower levels. Depressed pricing mirrored a world-wide surplus in ferroalloy supply.

The effect of weaker carbon markets was compounded by the foreclosure early in the year of one major customer and a lengthy strike at another. At year-end, a Federal Government investigation was launched into complaints by the graphite industry that furnace electrodes from Japan were being dumped in Canada.

Demand for Union Carbide's EVEREADY battery and lighting products remained strong in 1977, exceeding the previous year in spite of a retail environment that fell short of expectations.

# Resources and Responsibilities

## Employees

A skilled, enthusiastic work force is basic to the success of any company and Union Carbide continued in 1977 to place a major emphasis on programs to increase employee effectiveness and promote job satisfaction.

Initial training under the Union Carbide Management System was nearing completion at year-end, by which time more than 1,100 employees had taken part in programs designed to improve their managerial skills by giving them a deeper insight into their positions and accountabilities. The management system, with its emphasis on objective measurement of performance, enables the Company to equitably reward employees on the basis of their contribution and assists in the selection of candidates for promotion.

Union Carbide's comprehensive benefits package was further upgraded during the year. The non-contributory pension plan was improved for the third time in eight years and a completely new plan was introduced to help employees and their families pay for routine and restorative dental care.

The Company continued to encourage employees to think and act safely, both on and off the job. Disabling injuries – injuries which prevent employees from performing their assigned duties – were reduced by 20 per cent, compared to eight per cent the previous year. A drop of 28 per cent in recordable injuries was another gratifying result of the intensified safety education program.

Nine collective agreements were negotiated without a work stoppage.

## The Environment

In addition to meeting government regulations, Union Carbide constantly monitors its operations for possible threats to environmental quality, either inside or outside its plants. The principal vehicle for accomplishing this is the Company's Environmental Impact Analysis method of identifying and dealing with any existing or possible environmental hazards in any product, process or production facility.

During 1977, a major environmental control project was completed at the Beauharnois, Quebec, metals plant. Abatement equipment was built into the new Moore Township polyethylene plant in accordance with a general world-wide Union Carbide policy of equipping all new production facilities with the best practical pollution control equipment available.

At the Welland, Ontario, carbon products plant, work was completed on a 13-acre landscaping and redevelopment project which created an attractive greenbelt buffer area alongside the facility and a fully-equipped sportsfield and playground for a neighbouring school.

Widespread testing and sampling were undertaken in

*Union Carbide's professional development program in 1977 included a series of lectures and group discussions to give employees a broader view of the changing role of the working woman in today's business environment.*

work situations at all major plants. This resulted in programs to assure each employee of a work environment that is free of any potential health hazards.

*An impromptu game of soccer is enjoyed by youngsters on a fully-equipped sportsfield developed for a neighbouring school by Union Carbide as part of an extensive landscaping program at its Welland plant.*

## Energy

An extensive energy conservation program continued to be the first line of defence against rising energy costs. In 1977, recurring savings of more than $1.5 million were realized.

Union Carbide's goal for energy conservation exceeds the target of a joint industry-government program of voluntary conservation. The improvement in the Company's energy efficiency level has now reached more than half of the challenging goal set in 1976 for achievement by 1980.

An active role was maintained during the year in a number of trade associations which act to promote industry-wide and national energy conservation and also to ensure the fair pricing of all industrial energy forms.

# Consolidated Statement of Income and Retained Earnings

| | | Year Ended December 31, 1977 | | Year Ended December 31, 1976 |
|---|---|---|---|---|
| | (thousands of dollars) | | | |
| **Sales** | | $406,536 | | $393,735 |
| Cost of Goods Sold | $314,315 | | | 291,705 |
| Selling, General and Administrative Expenses | 39,096 | | | 31,895 |
| Depreciation and Amortization | 18,104 | | | 17,012 |
| Interest on Long-Term Debt | 16,217 | | | 14,385 |
| | | 387,732 | | 354,997 |
| | | 18,804 | | 38,738 |
| Investment Income | 5,831 | | | 7,888 |
| Gain on Disposal of Capital Assets | 1,273 | | | 777 |
| | | 7,104 | | 8,665 |
| | | 25,908 | | 47,403 |
| Income Taxes | | 6,600 | | 19,680 |
| | | 19,308 | | 27,723 |
| Share of Income of Companies carried at Equity | | 1,192 | | 1,648 |
| Income before Extraordinary Item | | 20,500 | | 29,371 |
| Per Common Share | $1.94 | | $2.94 | |
| Extraordinary Item | | – | | 2,750 |
| **Net Income** | | 20,500 | | 32,121 |
| Net Income per Common Share | $1.94 | | $3.21 | |
| Retained Earnings at January 1 | | 174,244 | | 150,998 |
| | | 194,744 | | 183,119 |
| Dividends Paid – Preferred | 804 | | | – |
| – Common | 9,000 | | | 8,875 |
| | | 9,804 | | 8,875 |
| **Retained Earnings at December 31** | | $184,940 | | $174,244 |

UNION CARBIDE CANADA LIMITED
and consolidated subsidiaries

The notes on pages 13, 14 and 15 are an integral part of this statement.

# Consolidated Statement of Changes in Financial Position

| | (thousands of dollars) Year Ended December 31, 1977 | Year Ended December 31, 1976 |
|---|---|---|
| **Source of Funds** | | |
| Operations | | |
| Net Income | $ 20,500 | $ 32,121 |
| Items not affecting Working Capital | | |
| Depreciation and Amortization | 18,104 | 17,012 |
| Transfer to Deferred Credits | 7,591 | 26,343 |
| Share of Unremitted Earnings of Companies carried at Equity | (140) | (985) |
| Gain on Disposal of Fixed Assets | (873) | (5,031) |
| Working Capital Provided from Operations | 45,182 | 69,460 |
| Net Proceeds from Preferred Share Issue | 59,700 | – |
| Net Proceeds from Long-Term Debt Issue | – | 58,275 |
| Proceeds on Disposal of Fixed Assets | 984 | 6,402 |
| | 105,866 | 134,137 |
| **Application of Funds** | | |
| Acquisition of Fixed Assets | 82,299 | 110,207 |
| Increase in Investments | 17,600 | 11,924 |
| Dividends Paid | 9,804 | 8,875 |
| Current Portion Long-Term Debt | 2,250 | 2,727 |
| Acquisition of Goodwill | 597 | 170 |
| Other – Net | (478) | 434 |
| | 112,072 | 134,337 |
| **Decrease in Working Capital** | (6,206) | (200) |
| **Working Capital at beginning of year** | 136,289 | 136,489 |
| **Working Capital at end of year** | $130,083 | $136,289 |
| **Changes in Components of Working Capital** | | |
| Cash and Marketable Securities | $ (23,132) | $ (15,971) |
| Receivables | 5,351 | 8,894 |
| Inventories | 7,513 | 13,206 |
| Prepaid Expense | 1,292 | 1,021 |
| Payables | 1,735 | (6,491) |
| Income and Other Taxes | 1,035 | (859) |
| | $ (6,206) | $ (200) |

UNION CARBIDE CANADA LIMITED
and consolidated subsidiaries

The notes on pages 13, 14 and 15 are an integral part of this statement.

# Consolidated Balance Sheet

| | | (thousands of dollars) December 31, 1977 | December 31, 1976 |
|---|---|---|---|
| **Assets** | | | |
| | Current Assets | | |
| | Cash and Marketable Securities | $ 17,468 | $ 40,600 |
| | Receivables | 71,349 | 65,998 |
| | Inventories | 101,270 | 93,757 |
| | Prepaid Expense | 5,189 | 3,897 |
| | Total Current Assets | 195,276 | 204,252 |
| | Fixed Assets | 371,134 | 306,845 |
| | Investments | 48,689 | 30,949 |
| | Other Assets | 4,232 | 4,018 |
| | | $619,331 | $546,064 |
| **Liabilities** | | | |
| | Current Liabilities | | |
| | Payables | $ 63,540 | $ 65,275 |
| | Income and Other Taxes | 1,653 | 2,688 |
| | Total Current Liabilities | 65,193 | 67,963 |
| | Deferred Credits | 91,848 | 84,257 |
| | Long-Term Debt | 157,750 | 160,000 |
| | | 314,791 | 312,220 |
| **Shareholders' Equity** | | | |
| | Capital Stock | | |
| | Authorized | | |
| | 6,000,000 Preferred Shares | | |
| | 12,500,000 Common Shares | | |
| | Issued | | |
| | 2,400,000 Preferred Shares | 60,000 | – |
| | 10,000,000 Common Shares | 59,600 | 59,600 |
| | Retained Earnings | 184,940 | 174,244 |
| | | 304,540 | 233,844 |
| | | $619,331 | $546,064 |

Signed on behalf of the Board
J. S. Dewar, Director
J. de Billy, Director

UNION CARBIDE CANADA LIMITED
and consolidated subsidiaries

The notes on pages 13, 14 and 15 are an integral part of this statement.

**Auditors' Report**

To the Shareholders of Union Carbide Canada Limited

We have examined the consolidated balance sheet of Union Carbide Canada Limited as at December 31, 1977 and the consolidated statements of income and retained earnings and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of the company as at December 31, 1977 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Toronto, Canada
January 24, 1978

Hurdman and Cranstoun

Chartered Accountants

# Notes to the 1977 Financial Statements

| | | (thousands of dollars) December 31, 1977 | December 31, 1976 |
|---|---|---|---|
| **1. Supplementary Balance Sheet Detail** | | | |
| Cash and Marketable Securities | | | |
| | Cash and Deposits | $ 12,516 | $ 18,754 |
| | Short-Term Securities | 4,952 | 21,846 |
| | | 17,468 | 40,600 |
| Receivables | Trade | 56,430 | 45,494 |
| | Affiliated Companies – Trade | 5,349 | 6,006 |
| | – Other | 447 | 3,594 |
| | Income Taxes Recoverable | 4,748 | 5,200 |
| | Miscellaneous | 4,375 | 5,704 |
| | | 71,349 | 65,998 |
| Inventories | Raw Materials and Supplies | 22,707 | 21,397 |
| | Work in Process | 29,562 | 26,997 |
| | Finished Goods | 49,001 | 45,363 |
| | | 101,270 | 93,757 |
| Fixed Assets | Land | 7,761 | 7,487 |
| | Buildings | 80,856 | 71,892 |
| | Machinery and Equipment | 458,930 | 389,310 |
| | Total Gross Fixed Investment | 547,547 | 468,689 |
| | Accumulated Depreciation | 176,413 | 161,844 |
| | Net Fixed Investment | 371,134 | 306,845 |
| Investments | Companies carried at equity in net assets | 6,378 | 6,284 |
| | Petrosar Limited | 37,935 | 20,891 |
| | Other Investments | 4,376 | 3,774 |
| | | 48,689 | 30,949 |
| Other Assets | Unamortized Commissions and Debt Discount | 2,941 | 2,957 |
| | Deferred Charges | 507 | 669 |
| | Patents, Trade Marks & Goodwill at unamortized cost | 784 | 392 |
| | | 4,232 | 4,018 |
| Payables | Affiliated Companies | 17,549 | 16,613 |
| | Current Portion Long-Term Debt | 1,550 | 2,727 |
| | Other | 44,441 | 45,935 |
| | | 63,540 | 65,275 |
| Deferred Credits | Income Taxes | 84,991 | 79,358 |
| | Investment Tax Credits | 6,857 | 4,899 |
| | | 91,848 | 84,257 |
| Long-Term Debt | a) 8⅜% Unsecured Debentures maturing May 1, 1992. Mandatory sinking fund payments of $750,000 annually commencing May 1, 1978 | 24,250 | 25,000 |
| | b) 10¾% Unsecured Debentures maturing June 15, 1995. Mandatory sinking fund payments of $3,000,000 annually commencing June 15, 1981 | 75,000 | 75,000 |
| | c) 9¼% Unsecured Notes maturing May 1, 1982 | 30,000 | 30,000 |
| | d) 9¾% Unsecured Debentures maturing | | |

| | | |
|---|---|---|
| May 1, 1986. Mandatory sinking fund payments of $1,500,000 annually commencing May 1, 1978 | 28,500 | 30,000 |
| | 157,750 | 160,000 |

Capital Stock

Authorized

6,000,000 preferred shares issuable in series with a par value for each series to be fixed by the directors at not less than $10 nor more than $50 per share but not exceeding in the aggregate $150,000,000. 12,500,000 common shares without nominal or par value.

| Issued | | |
|---|---|---|
| 2,400,000 Preferred Shares Series A | 60,000 | – |
| 10,000,000 Common Shares | 59,600 | 59,600 |
| | 119,600 | 59,600 |

The 2,400,000 preferred shares Series A have a par value of $25 each and were issued September 1, 1977 by way of private placement to Canadian institutions. These shares have a cumulative floating rate dividend adjusted and payable quarterly equal to the sum of 1¼% and one-half of bank prime interest rate. They are redeemable at par at the option of the Company after but not before August 31, 1980 and are retractable at par at the option of the holder on June 1, 1987.

**2. Summary of Accounting Policies**

Principles of Consolidation

The consolidated financial statements include the assets, liabilities, revenues and expenses of all significant subsidiaries. Investment in companies 25 to 50 per cent owned are carried at equity in net assets and the Company's share of their earnings is included in the income statement. The excess purchase price over equity value at time of acquisition (ie., goodwill) is amortized over five years. Other investments (including Petrosar Limited referred to in Note 4) are carried at cost or less. The following is a financial summary of those companies carried at equity:

| | (thousands of dollars) **December 31, 1977** | December 31, 1976 |
|---|---|---|
| Total Assets | $30,198 | $29,216 |
| Less Total Liabilities | 17,091 | 16,241 |
| Net Assets | 13,107 | 12,975 |
| UCCL Equity in Net Assets | 6,378 | 6,284 |
| UCCL Equity in Net Income | 1,192 | 1,648 |

Short-Term Securities

Short-Term securities are carried at cost, which approximates market.

Inventories

Inventory values, which do not include depreciation of fixed assets, are stated at cost and net realizable value, whichever is lower. Cost is determined on the average cost method.

Fixed Assets and Depreciation

The Company carries fixed assets at cost. Expenditures for replacements are capitalized and the replaced items are retired. Maintenance and repairs are charged to operations. The Company uses straight-line depreciation for financial accounting purposes. Rates are based on estimates of useful life for each group of depreciable fixed assets. Depreciation is not charged on new assets until they become operative. Gain or loss on disposal of fixed assets is calculated on the remaining net book value at the time of disposal and is reflected in income.

Research and Development

Research and development costs are charged to cost of goods sold as incurred.

Income Taxes

The Company uses the deferral method of tax allocation to provide for income taxes. The time in which transactions affect taxable income frequently differs from the time in which they enter into the determination of income in the financial statements. The cumulative differences between taxes provided and taxes payable are shown under "Deferred Credits" on the Consolidated Balance Sheet. Invest-

ment tax credits are amortized over a ten-year period with the annual amortized amount accounted for as a reduction in the provision for income taxes.

The provision for income taxes in 1977 was reduced by $4.2 million as a result of the 3% inventory allowance, investment tax credits and adjustment to provisions made in previous years.

**Employee Retirement Program**

The actuarial liability for past service costs under the retirement program, estimated to be $25,673,000 at January 1, 1977, will be amortized over a period ending in 1991 in accordance with current pension legislation.

**3. Extraordinary Item**

In 1976, the extraordinary item consisted of a gain on divestment of the phenolic resins business.

**4. Commitments**

a) The Company has a 20% equity interest in Petrosar Limited with which the Company has entered into long term take or pay contracts for the purchase of ethylene and atmospheric residual oil. The atmospheric residual oil contract was entered into by the Company as accommodation purchaser for Union Carbide Corporation which has undertaken to protect the Company from all losses which may be incurred thereunder.
The Company is committed to advance 30.4% of any funds necessary to make up any deficiency in meeting certain of the debt obligations of Petrosar Limited, including bank loans and customer prepayments.
The Company and Petrosar Limited have approved a proposal whereby, in 1978, Petrosar will refinance its term indebtedness, including its subordinated debentures held by the Company, by the issue of preference shares of several classes of which the most senior would be held by Petrosar's bankers, would carry the right to a cumulative preferential floating rate dividend and would be retractable over a period expiring December 31, 1987. If the proposal is approved by all parties, the Company will be committed to purchase the right to such dividend or to purchase the said shares from the banks to the extent of 30.4% thereof if Petrosar should default in meeting certain conditions. Also, the Company will be committed to subscribe for $6.1 million of a class of preference shares of Petrosar Limited, in addition to those replacing subordinated debentures as aforesaid, ranking in all respects behind the shares to be held by the banks.
Union Carbide Corporation has agreed to advance or cause to be advanced to the Company an amount equal to 33.2% of any funds required to be paid pursuant to the aforementioned financial commitments of the Company.

b) Commitments at December 31, 1977 for capital expenditures amounted to approximately $36.9 million.

**5. Directors' and Officers' Remuneration**

In 1977, four directors received aggregate remuneration of $34,100 as directors and seven directors received no remuneration as directors. Eight officers earned aggregate remuneration of $783,131 as officers. Five officers were also directors.

**6. Anti-Inflation Legislation**

In 1975, the government enacted legislation, which is applicable to the Company, to restrain increases in prices, compensation and dividends.

**7. Sales**

Consolidated sales by class of business and proportion of the total were:

| | 1977 | % of Total | 1976 | % of Total | % Change from 1976 |
|---|---|---|---|---|---|
| Chemicals | $ 63,242 | 16 | $ 52,782 | 13 | +20 |
| Plastics | 142,039 | 35 | 135,864 | 35 | + 5 |
| Gases | 63,187 | 15 | 68,648 | 17 | − 8 |
| Metals and Carbons | 138,068 | 34 | 136,441 | 35 | + 1 |
| | $406,536 | 100 | $393,735 | 100 | + 3 |

**8. Net Income per Common Share**

The calculation of Net Income Per Common Share is based on earnings available after provision for dividends on the Preferred Shares. In 1977, the provision amounted to $1,072,000, of which $804,000 had been declared and paid.

**9. Comparative Figures**

Certain of the figures in the Company's 1976 financial statements have been reclassified to conform with the financial presentation adopted for 1977.

# Five Year Summary

| | | 1977 | 1976 | 1975 | 1974 | 1973 |
|---|---|---|---|---|---|---|
| **Sales** | | | | | | |
| | Chemicals | $ 63,242 | $ 52,782 | $ 56,800 | $ 52,878 | $ 40,817 |
| | Plastics | 142,039 | 135,864 | 119,726 | 110,146 | 82,832 |
| | Gases | 63,187 | 68,648 | 73,770 | 54,155 | 40,688 |
| | Metals and Carbon | 138,068 | 136,441 | 127,876 | 124,178 | 81,351 |
| | | $406,536 | $393,735 | $378,172 | $341,357 | $245,688 |
| **Net Income** | | 20,500 | 32,121 | 43,136 | 45,085 | 16,907 |
| **Net Income** after provision for dividends on preferred shares | | 19,428 | 32,121 | 43,136 | 45,085 | 16,907 |
| | % of Sales | 4.8% | 8.2% | 11.4% | 13.2% | 6.9% |
| | Per Common Share | 1.94 | 3.21 | 4.31 | 4.51 | 1.69 |
| **Total Assets** | | 619,331 | 546,064 | 431,852 | 316,528 | 229,665 |
| **Working Capital** | | 130,083 | 136,289 | 136,489 | 77,212 | 63,258 |
| **Construction Expenditures** | | 82,299 | 110,207 | 74,784 | 46,767 | 21,084 |
| **Depreciation and Amortization** | | 18,104 | 17,012 | 14,811 | 13,950 | 13,691 |
| **Employee Data** | | | | | | |
| | Wages and Salaries | 80,621 | 75,168 | 62,845 | 56,535 | 48,463 |
| | Average Number of Employees | 4,695 | 4,819 | 4,858 | 4,943 | 4,807 |



(dollars in thousands – except per share figures)

## Plants and Products

### Carbon
Welland and Toronto, Ontario

Electric Arc Furnace Electrodes/Electrolytic Cell Anodes/Furnace Linings/Electric Motor and Generator Brushes/Theatre Projector Carbons/Carbon and Graphite Products for chemical, electrical, mechanical and metallurgical applications

### Chemicals
Montreal East, Quebec

UNION CARBIDE Organic Chemicals, including Ethylene Oxide, Ethanolamines, Glycols and Glycol Ethers/ Agricultural Chemicals/Silicone Chemicals, Resins, Oils and Elastomers/Urethane Foam Intermediates/ Vinyl Coating Resins/CELLOSIZE/CARBOWAX Polyethylene Glycols/UCON Lubricants/UCAR Latices

### Consumer Products
Toronto, Orangeville and Walkerton, Ontario/Cowansville, Quebec.

EVEREADY Flashlight, Transistor, Alkaline, Hearing Aid, Nickel Cadmium and other Batteries/EVEREADY Flashlight Cases and Lanterns/EVEREADY Flashlight Lamps/PRESTONE II Anti-Freeze and Summer Coolant/ PRESTONE Car Care Products/GLAD Food Wrap, Bags and Garbage Bags

### Gases
Vancouver and Vernon, British Columbia/Calgary and Edmonton, Alberta/Saskatoon, Saskatchewan/Selkirk, Thompson and Transcona, Manitoba/Thunder Bay, Sault Ste. Marie, London, Mississauga, Oakville, Sarnia and Ottawa, Ontario/Noranda, Arvida, Montreal, Montreal East, Tracy, Lauzon and Sept-Iles, Quebec/Saint John, New Brunswick/Halifax, Nova Scotia

LINDE Oxygen, Nitrogen, Hydrogen, Argon, Helium, Carbon Dioxide and Rare Gases/Specialty Gas Mixtures/ Fumigants and Sterilants/Calcium Carbide and Acetylene/Gas and Electric Welding, Cutting, Forming and Heat-Treating Apparatus/Welding Rods, Wire and Electrodes/Power Sources/Heat Exchangers/ Steel-Conditioning Machines/Rock-Piercing and Shaping Equipment/Medical Gases, Inhalation and Suction Therapy Equipment/Distillation Trays/Cryogenic Equipment/Food Freezing Equipment/Molecular Sieves/UNOX System for secondary wastewater treatment

### Metals
Beauharnois and Chicoutimi, Quebec

Ferroalloys, Alloying Metals, Pure Metals and Metal Compounds produced from the elements Boron, Calcium, Chromium, Manganese, Silicon, Titanium, Tungsten, Vanadium and Zirconium

### Plastics
Lindsay and Moore Township, Ontario/Cowansville and Montreal East, Quebec

UNION CARBIDE Low- and High-Density Polyethylene Resins/Co-Polymers/Vulcanizable and Semi-Conductive Compounds/Polyethylene Film/Polyethylene Powders/ Polysulfone Resins/Polyvinyl Chloride Compounds and Sheeting/Polystyrene Resins/VISKING Cellulose Food Casings/ VISTEN and PERFLEX S Specialty Films

### Principal operating subsidiaries
Dominion Viscose Products Limited – cellulose food casings/Smelter Power Corporation – hydro-electric power

**Union Carbide Canada Limited**

| | |
|---|---|
| **Head Office** | 123 Eglinton Avenue East<br>Toronto, Canada<br>M4P 1J3 |
| **Stock Transfer Agent and Registrar** | Canada Permanent Trust Company<br>Halifax, Montreal, Toronto, Winnipeg<br>and Vancouver |
| **Stock Exchange Listings** | Montreal and Toronto |
| **Auditors** | Hurdman and Cranstoun<br>Toronto |